

Notice of Allowability	Application No.	Applicant(s)	
	10/533,658	PATWARDHAN, NIKET KESHAV	
	Examiner	Art Unit	
	Sai-Ming Chan	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7/9/2008.
2. ☒ The allowed claim(s) is/are 2-5.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

/Sai-Ming Chan/
Examiner, Art Unit 2416

/Seema S. Rao/
Supervisory Patent Examiner, Art Unit 2416

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Niket Patwardhan on December 19, 2008.

The application has been amended as follows:

Claims:

2) (currently amended) A digital broadcast system with increased probability of a whole message being successfully transmitted, comprising;

- a multiplexor to combine one or more bits from multiple messages into a digital symbol, so each symbol has bits from multiple messages;

- a DA converter, which could be comprised of a separate DA converter and an RF modulator, that converts the digital symbol into an analog symbol;

- an AD converter, which could be comprised of a separate RF demodulator and AD converter, that converts the analog symbol back into a digital symbol;

- a demultiplexor that recreates each message from corresponding parts of multiple digital symbols;

~~where~~ wherein the symbols transmitted by the system between the multiplexor and demultiplexor are selected from a hierarchy of non-confusable groups; and wherein the "hierarchy of non-confusable groups" is a hierarchical grouping of the symbols, created as follows:

- a. find groups of symbols for which the receiver will not be confused about which group the symbol belongs to, for certain levels of noise;

- b. arrange the groups into a hierarchy by noise level;

~~where and wherein~~

i. the analog symbols are labelled with a digital symbol composed of multiple parts or bits, such that each ~~portion~~ bit of the label makes a choice at a particular level of the hierarchy, ~~wherein~~

ii. the more significant bits are defined as those bits that make a choice at higher levels of the hierarchy;

iii. with the result that when using digital symbols with binary bits all the symbols with 1 in the most significant bit are in one top level group, the symbols with 0 in the most significant bit are in the other top level group, and the most significant bit specifies which group of the groups in the top level of the hierarchy the symbol is in;

iv. the next most significant bit splits each top level group as in iii, and together these two bits specify which group of all the groups in the second level of the hierarchy the symbol is in;

v. and this group splitting is applied recursively with each succeeding bit until using all the bits including the least significant bit specifies which group of the groups in the lowest level of the hierarchy the symbol is in;

and ~~wherein~~ each message is transmitted using ~~the same portion of the symbol label bits of the label having the same significance~~ in every symbol sent to transmit the message.

Conclusion

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Sai-Ming Chan whose telephone number is (571) 270-1769. The Examiner can normally be reached on Monday-Thursday from 8:00 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

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/Sai-Ming Chan/

Examiner, Art Unit 2616

December 19, 2008

/Seema S. Rao/

Supervisory Patent Examiner, Art Unit 2416